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(54) Title: **SYNTHETIC COMPOUNDS AND DERIVATIVES AS MODULATORS OF SMOKING OR NICOTINE INGESTION AND LUNG CANCER**

(57) Abstract: Disclosed are nicotine-related compounds that selectively inhibit cytochrome P-450 2A6 (CYP2A6), selectively inhibit cytochrome P-450 2A13 (CYP2A13), and/or selectively modulate a nicotinic acetylcholine receptor (nAChR). Also disclosed are pharmaceutical compositions comprising a compound of the invention, as well as methods of using the pharmaceutical compositions for treating or preventing a disease or disorder associated with nicotine-ingestion, or a disease or disorder amenable to treatment by selective modulation of nAChRs.



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